

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 45: 11/5/17-11/11/17

Influenza activity is increasing in Louisiana. The majority of positive influenza specimens from the state public health laboratory are influenza A/H3. The most commonly reported other respiratory viruses are RSV and Rhino/Enterovirus.

The Influenza Surveillance Summary Report describes the results of the tracking done by the Louisiana Office of Public Health Infectious Disease Epidemiology Section (IDEpi). This report relies on data supplied by sentinel surveillance sites, including hospital emergency departments (ED), laboratories and physicians' offices. Sentinel sites provide weekly data on Influenza Like Illness (ILI) and/or laboratory confirmed cases.

Taken together, ILI surveillance and laboratory surveillance provide a clear picture of the influenza activity occurring in Louisiana each week. If you have any questions about our surveillance system or would like more information, please contact Julie Hand at 504-568-8298 or julie.hand@la.gov.

ILI is defined as an illness characterized by cough and/or cold symptoms and a fever of 100° F or greater in the absence of a known cause. While not every case of ILI is a case of influenza, the CDC has found that trends in ILI from sentinel sites are a good proxy measure of the amount of influenza activity in an area. For this reason, all states and territories participating in the national surveillance program monitor weekly ILI ratios from their sentinel surveillance sites.

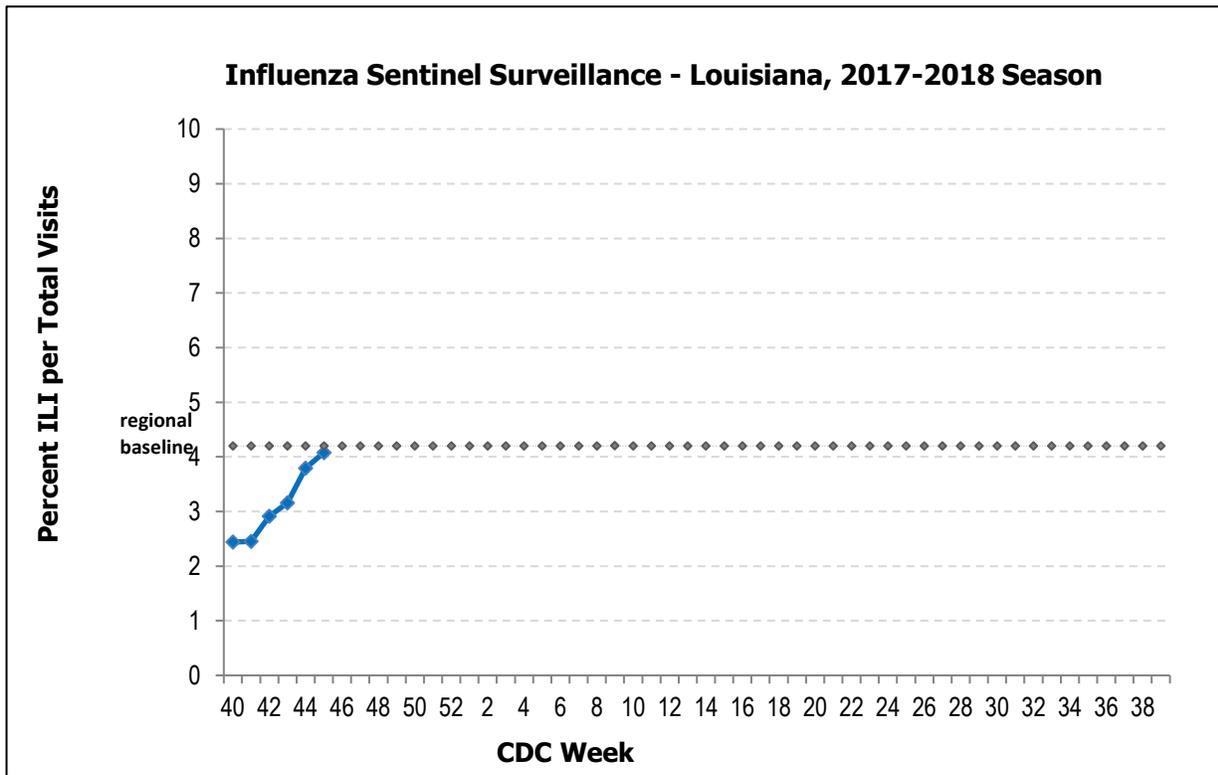


Laboratory testing: Not all sentinel sites have access to laboratory testing. However, many hospitals and physicians' offices do perform some influenza testing. Sites that test for influenza report the number of positive tests each week and the total number of tests performed each week. This information is included on page 3 of this report.

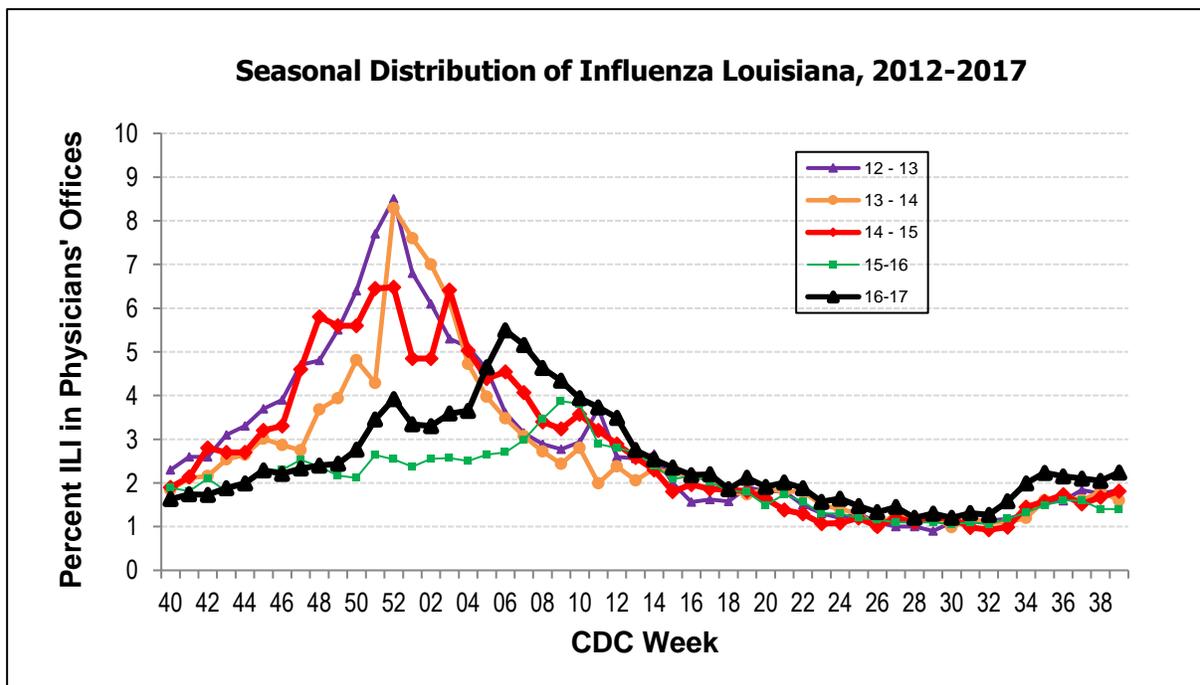
Page 2 : ILI Activity
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Page 4: Geographic Distribution
Page 5 & 6: Regional & National Data

2017-2018 Season

This graph shows the percentage of visits for ILI over the total number of visits for sentinel surveillance sites. This is the best approach to estimate the magnitude of influenza transmission. ILI counts do include some viral infections other than influenza, but experience over the last 50 years has shown that this approach is a reliable method to estimate influenza transmission. It does not show which strain of influenza virus is responsible. The page on lab surveillance does show the proportion of specimens attributable to each virus strain.

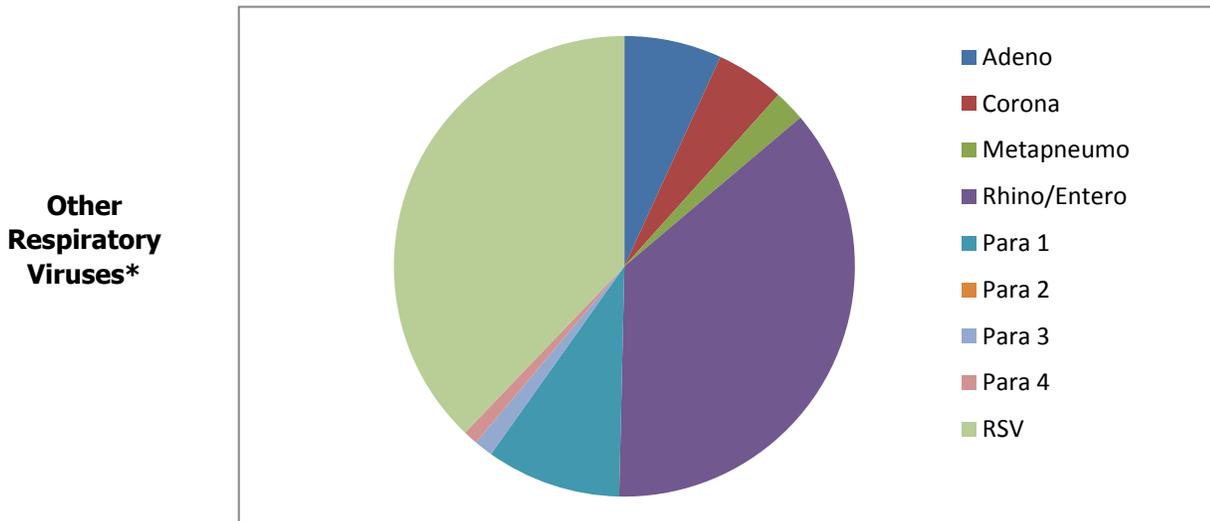
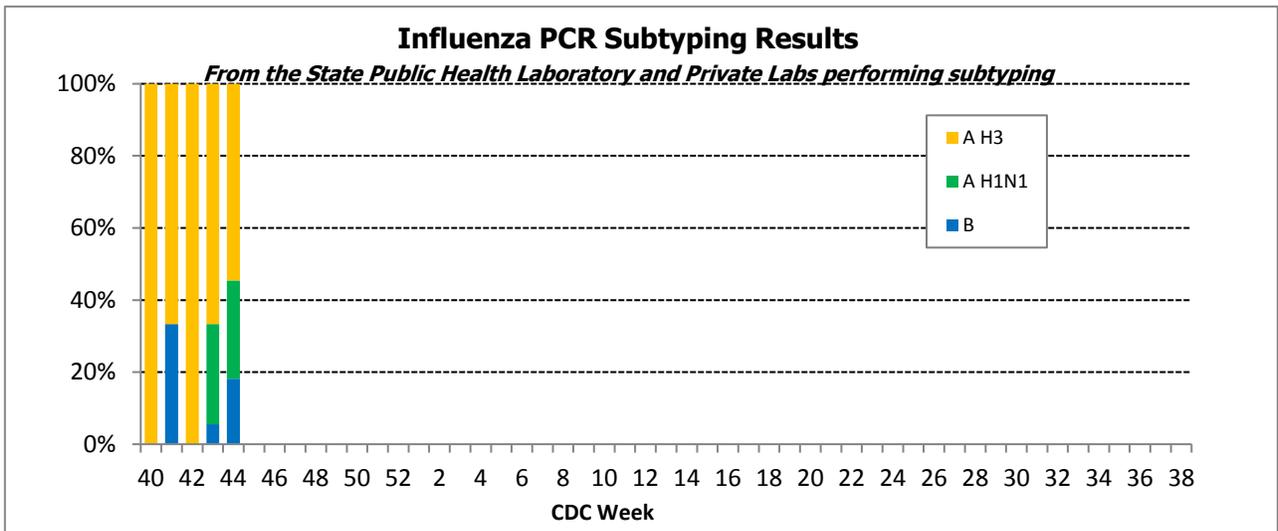
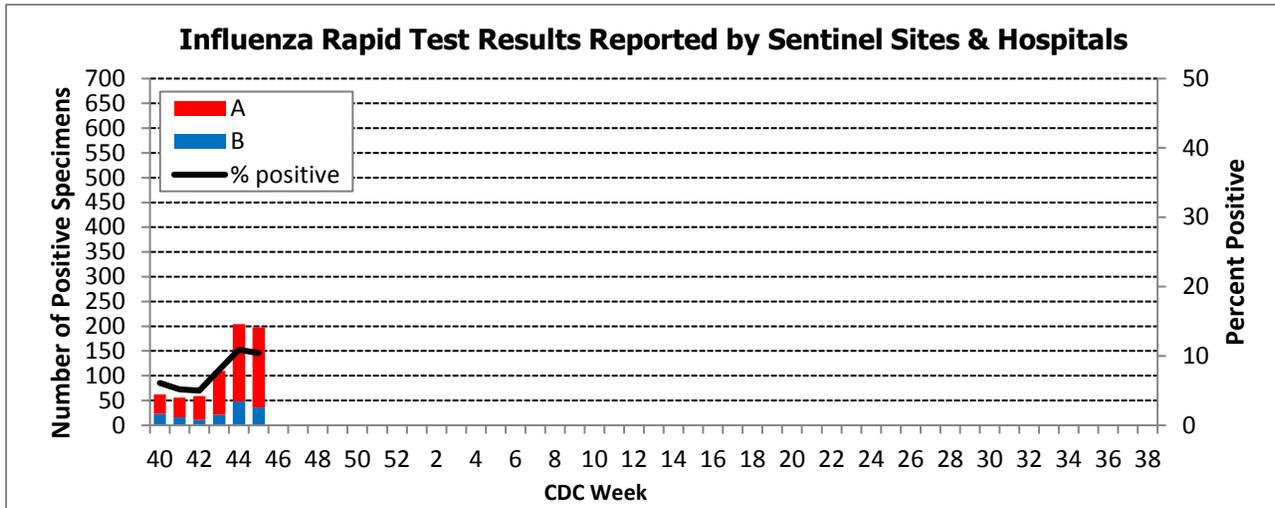


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2017-2018 Season

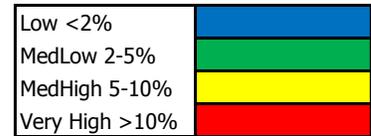
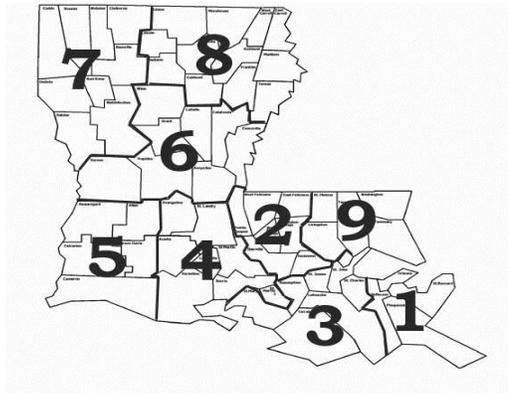
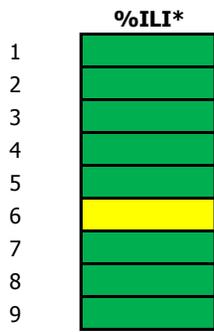
Virologic Surveillance



*Based on results from the State Public Health Laboratory Respiratory Virus Panel (RVP) Testing and other labs reporting RVP results over the last 4 weeks.

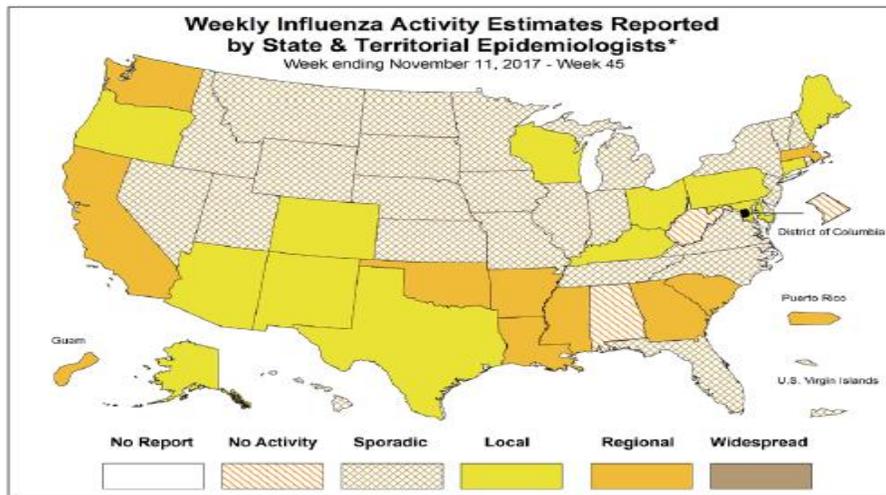
2017-2018 Season

Geographical Distribution of ILI



* %ILI over the last 4 weeks based on sentinel surveillance data

Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists



* This map indicates geographic spread & does not measure the severity of influenza activity

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet 2017-18 Influenza Season Week 45 ending Nov 11, 2017

ILINet Activity Indicator Map



2017-2018 Season

National Surveillance

During week 45, influenza activity is increasing in the United States.

The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold.

No influenza-associated pediatric deaths were reported.

The proportion of outpatient visits for influenza-like illness (ILI) was 1.9%, which is below the national baseline of 2.2%.

Clinical Laboratory Data

	Week 45	Data Cumulative since October 1, 2017 (Week 40)
No. of specimens tested	15,254	96,628
No. of positive specimens (%)	677 (4.4%)	2,811 (2.9%)
<i>Positive specimens by type</i>		
Influenza A	507 (74.9%)	2,004 (71.3%)
Influenza B	170 (25.1%)	807 (28.7%)

Public Health Laboratory Data

	Week 45	Data Cumulative since October 1, 2017 (Week 40)
No. of specimens tested	714	5,854
No. of positive specimens*	173	1,129
<i>Positive specimens by type/subtype</i>		
Influenza A	154 (89.0%)	993 (88.0%)
(H1N1)pdm09	12 (7.8%)	94 (9.5%)
H3	135 (87.7%)	878 (88.4%)
Subtyping not performed	7 (4.5%)	21 (2.1%)
Influenza B	19 (11.0%)	135 (12.0%)
Yamagata lineage	8 (42.1%)	75 (55.6%)
Victoria lineage	2 (10.5%)	3 (2.2%)
Lineage not performed	9 (47.4%)	57 (42.2%)

HHS Surveillance Region Data:

<i>U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) 2017-2018 Influenza Season</i>										
<i>HHS Region 6 (AR, LA, NM, OK, and TX) (Baseline: 4.2%) Data as of Friday, November 17, 2017</i>										
CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201742	277	801	764	487	192	174	2418	108780	2.2	2.0
201743	279	935	844	494	204	144	2621	110213	2.4	2.3
201744	238	985	1096	570	238	190	3079	103810	3.0	3.0
201745	261	1088	1207	754	297	167	3513	106128	3.3	3.3

Region 6 (AR, LA, NM, OK, TX)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVlc	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201742	10	91	0	1	20	0	0	0	1	26	2596	60	2.31	47	13
201743	9	130	0	8	25	0	1	0	0	26	2858	83	2.90	66	17
201744	7	96	0	5	23	0	3	0	2	26	3399	180	5.30	125	55
201745	7	60	0	3	26	0	1	0	0	23	2744	165	6.01	145	20

2017-2018 Season

Antiviral Resistance: A total of 517 specimens collected during May 21-November 11, 2017, were tested for resistance to the influenza neuraminidase inhibitor antiviral medications currently approved for use against seasonal influenza: oseltamivir, zanamivir, and peramivir. A total of 73 influenza A(H1N1)pdm09, 306 influenza A(H3N2), and 137 influenza B viruses were found to be sensitive to all three antiviral medications. An additional one influenza A(H1N1)pdm09 virus was tested for resistance to oseltamivir and peramivir and 14 influenza A(H3N2) viruses were tested for resistance to oseltamivir and zanamivir. All were found to be sensitive to both antiviral medications.

Antigenic Characterization

During May 21 – November 11, 2017, CDC antigenically characterized 282 influenza viruses [56 influenza A(H1N1)pdm09, 134 influenza A(H3N2), and 92 influenza B viruses] collected by U.S. laboratories. Antigenic similarity is evaluated by comparing cell-propagated circulating viruses with cell-propagated reference viruses representing the recommended vaccine components of the Northern Hemisphere 2017-18 vaccine.

Influenza A Virus [190]

A(H1N1)pdm09 [56]: All 56 influenza A(H1N1)pdm09 viruses were antigenically characterized using ferret post-infection antisera as A/Michigan/45/2015 (H1N1)pdm09-like.

A(H3N2) [134]: 130 of 134 (97.0%) influenza A(H3N2) viruses were antigenically characterized as A/Hong Kong/4801/2014-like by HI testing or neutralization testing. Among the viruses that reacted poorly with ferret antisera raised against A/Hong Kong/4801/2014-like viruses, all belong to genetic group 3C.3a.

Influenza B Virus [92]

Victoria Lineage [33]: 22 of 33 (66.7%) B/Victoria-lineage viruses were antigenically characterized using ferret post-infection antisera as B/Brisbane/60/2008-like. Among the viruses that reacted poorly with ferret antisera raised against B/Brisbane/60/2008-like viruses, all were double deletion viruses.

Yamagata Lineage [59]: All 59 (100%) B/Yamagata-lineage viruses were antigenically characterized using ferret post-infection antisera as B/Phuket/3073/2013-like.